

Title: LOUDSPEAKER DESIGN
METHOD

Inventor(s): Nicholas P. R. HILL et
al.

DOCKET NO.: 085874/0304

1/13

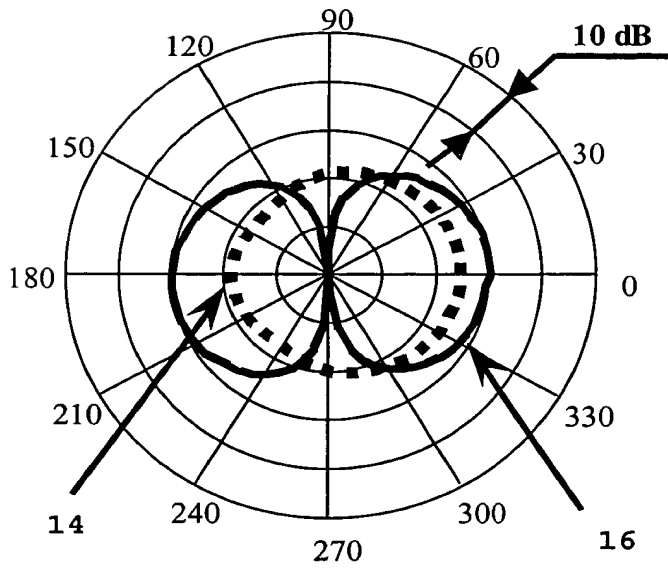


Fig. 1a

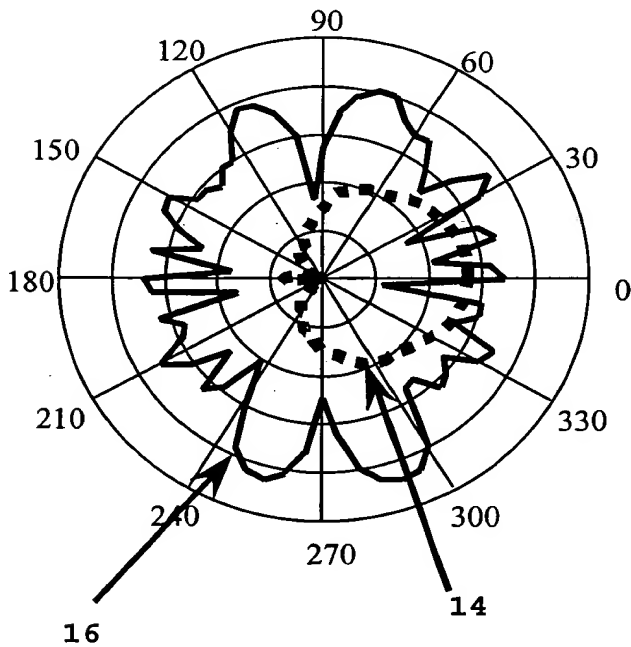


Fig. 1b

Title: LOUDSPEAKER DESIGN
METHOD

Inventor(s): Nicholas P. R. HILL et
al.

DOCKET NO.: 085874/0304

2/13

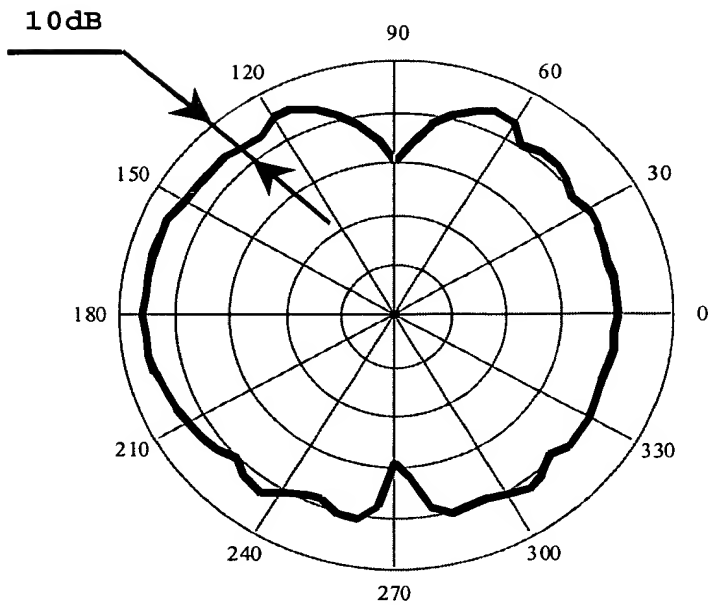


Fig. 2

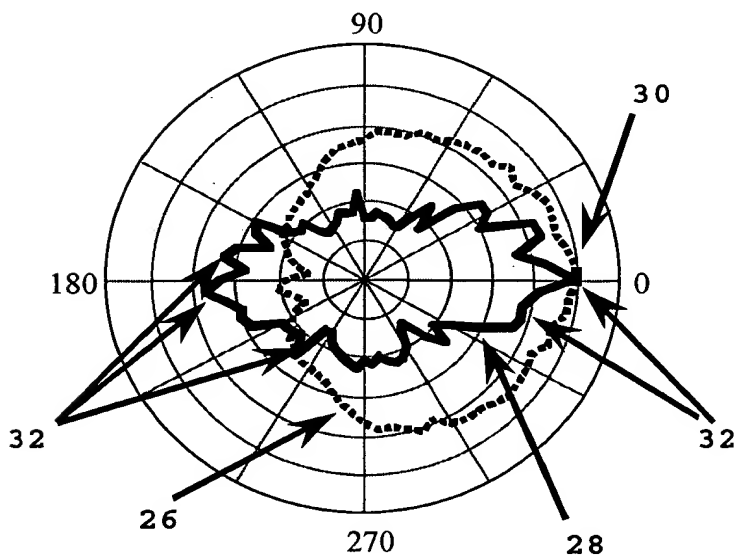


Fig. 5

dB, arb. units

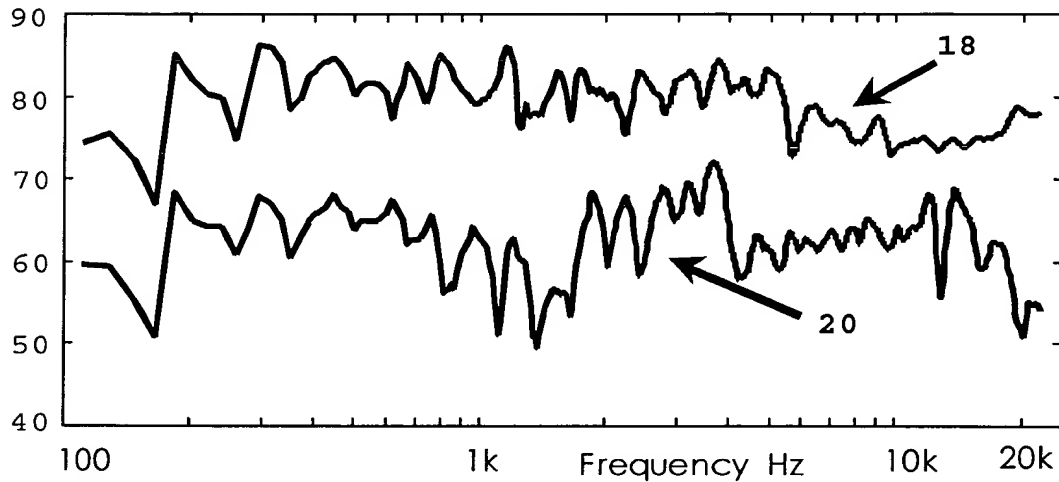


Fig. 3a

dB, arb. units

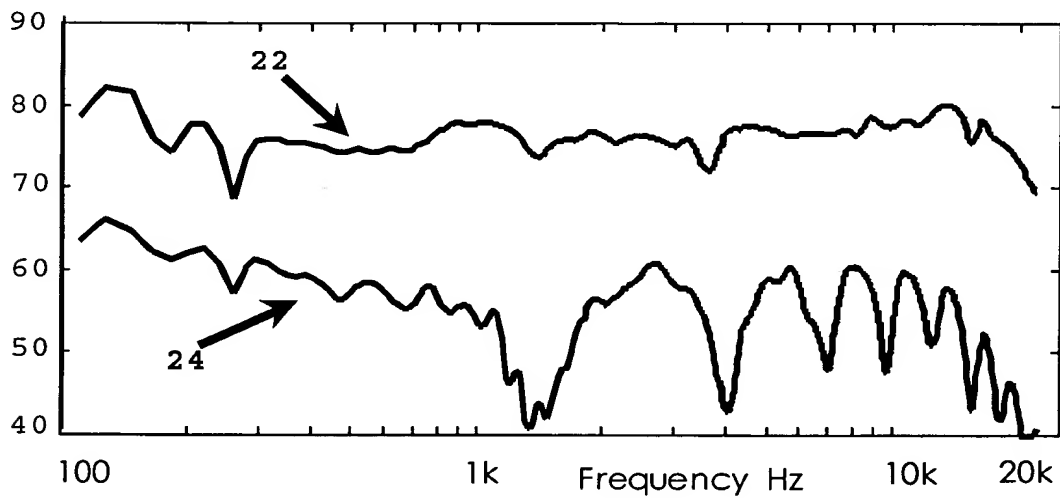


Fig. 3b

4/13

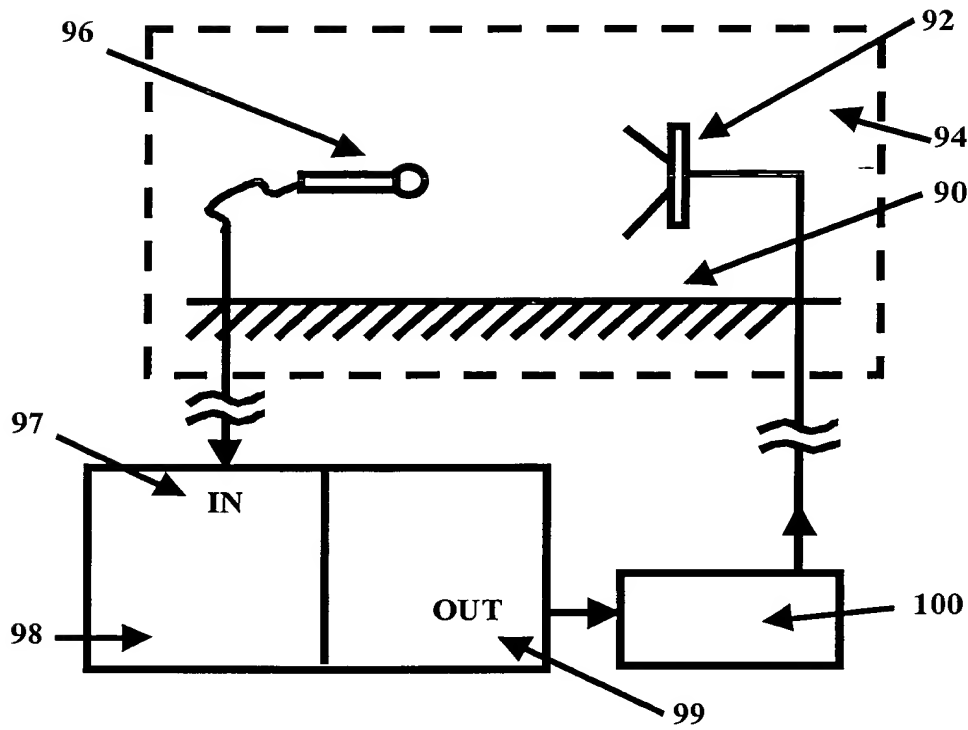


Fig. 3c

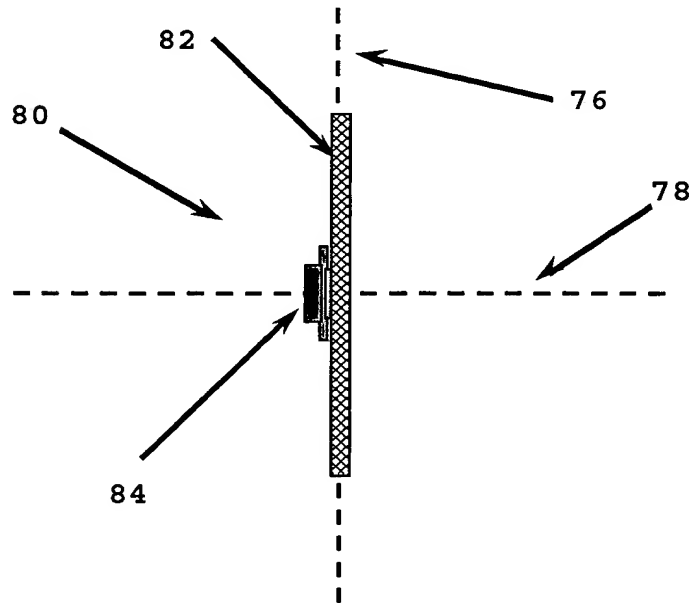
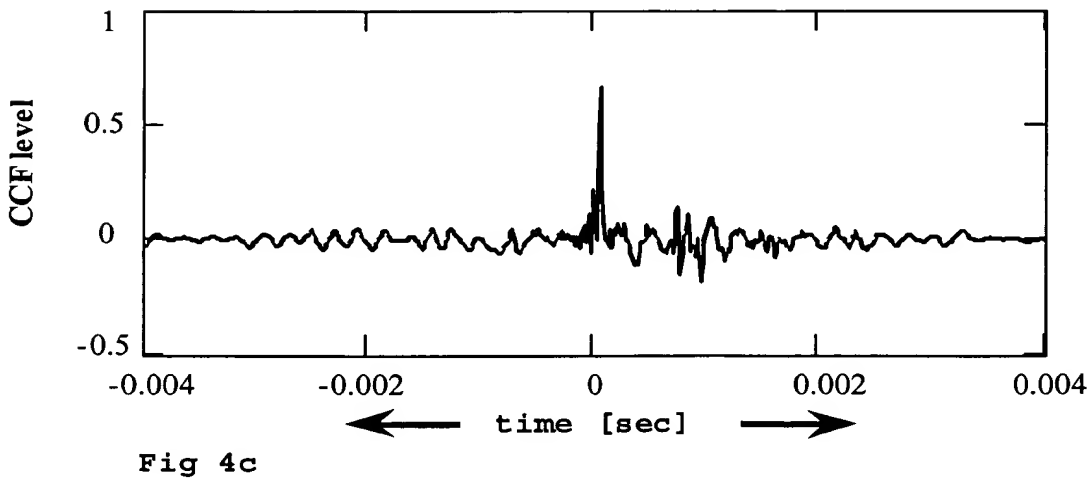
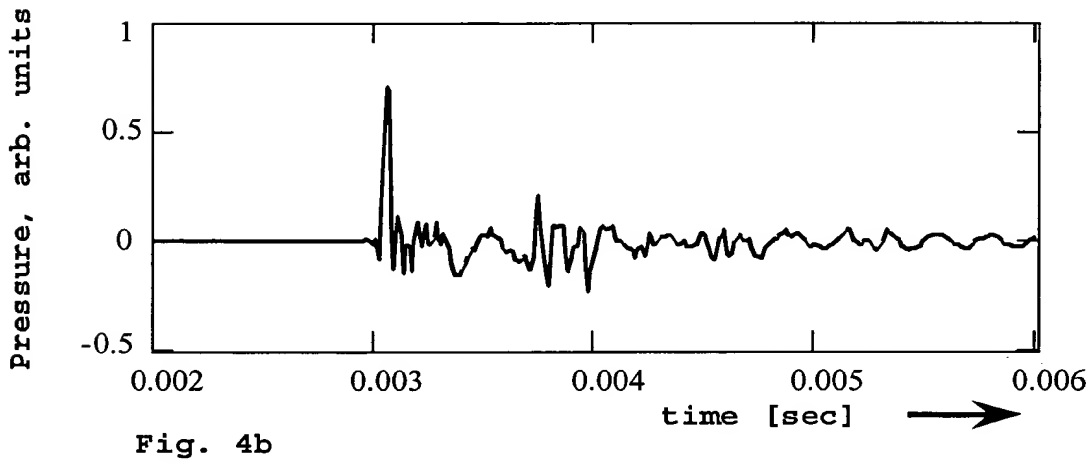
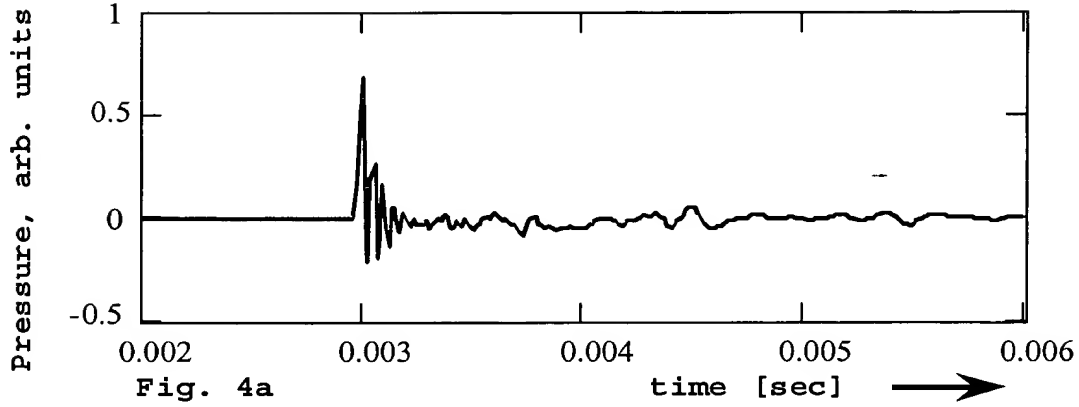


Fig. 15

5/13



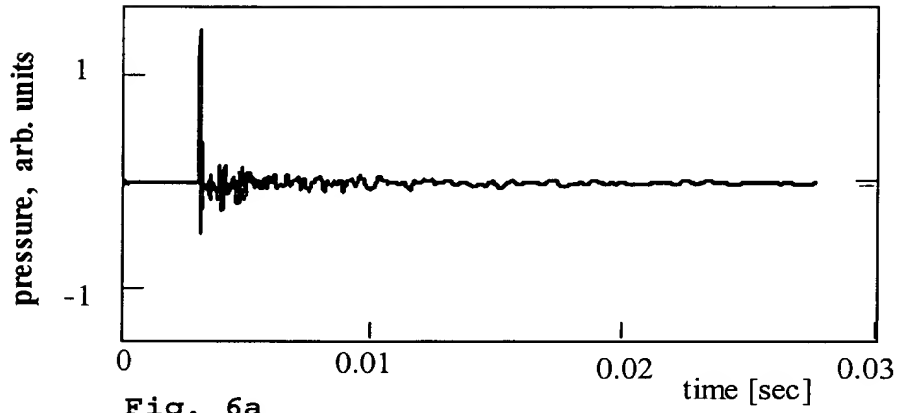


Fig. 6a

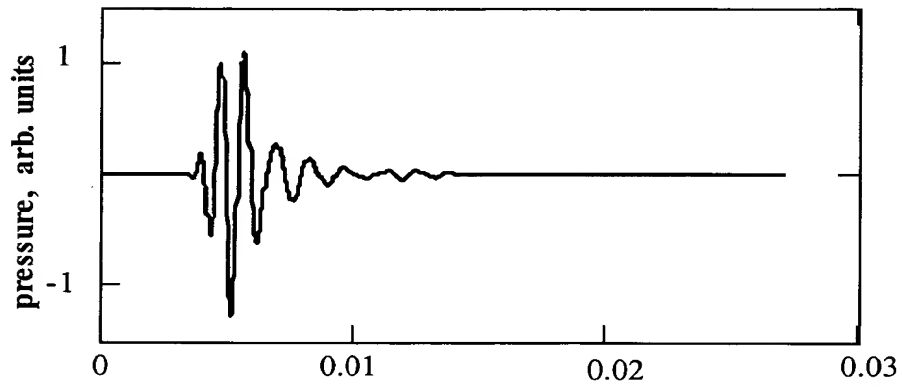


Fig. 6b

Title: LOUDSPEAKER DESIGN
METHOD

Inventor(s): Nicholas P. R. HILL et
al.

DOCKET NO.: 085874/0304

7/13

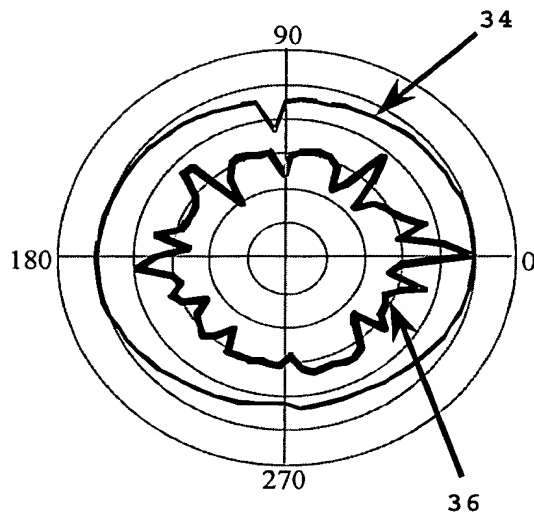


Fig. 7a

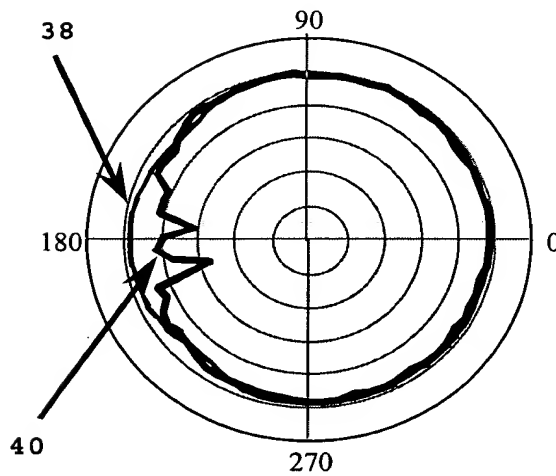


Fig. 7b

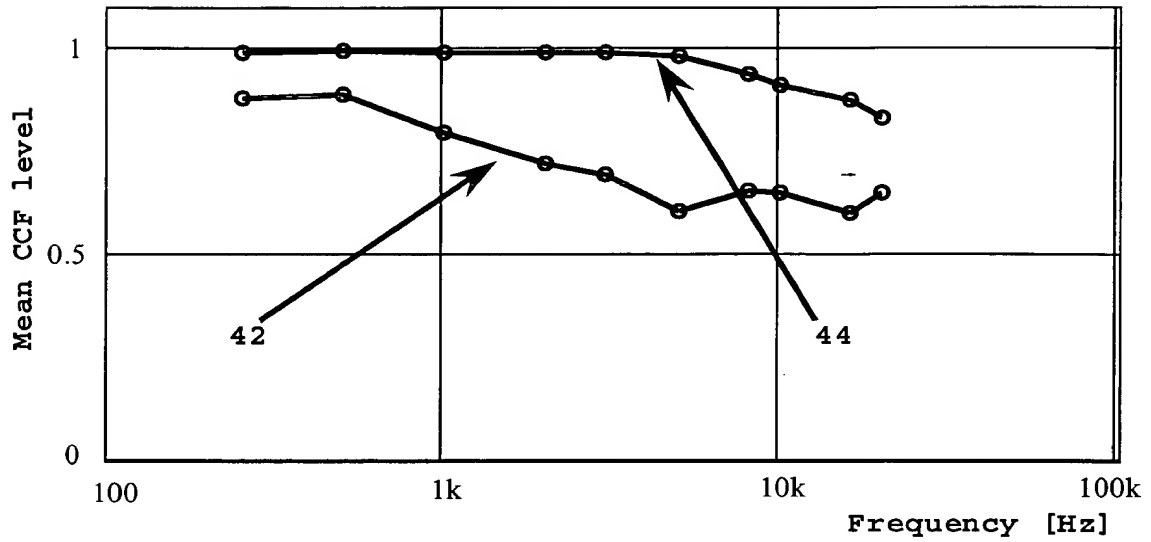


Fig. 8

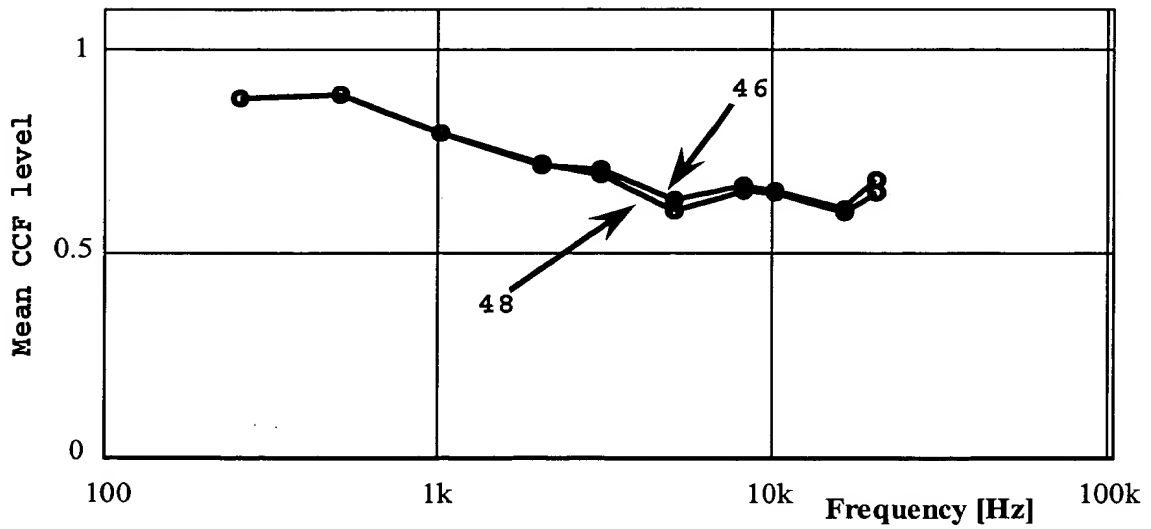


Fig. 9

Title: LOUDSPEAKER DESIGN
METHOD

Inventor(s): Nicholas P. R. HILL et
al.

DOCKET NO.: 085874/0304

9/13

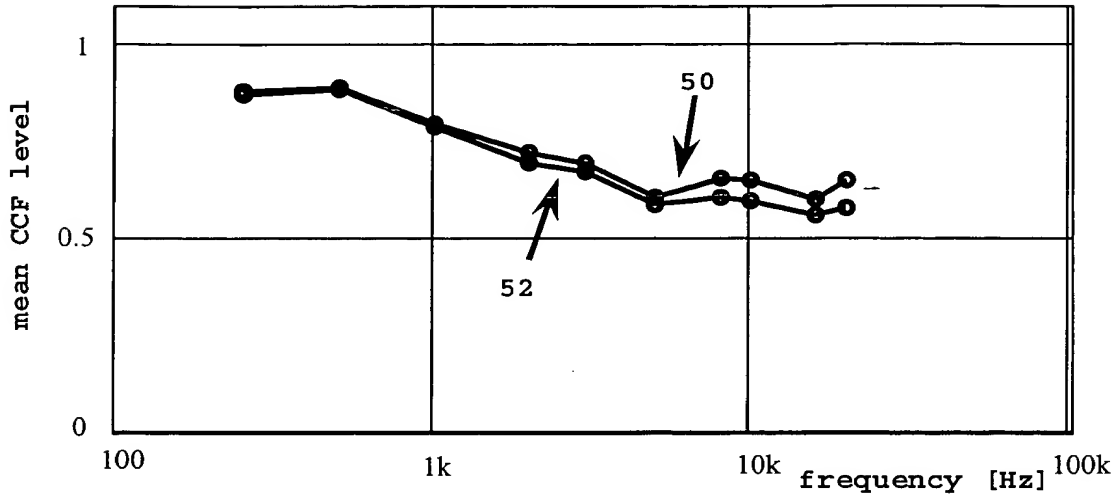


Fig. 10

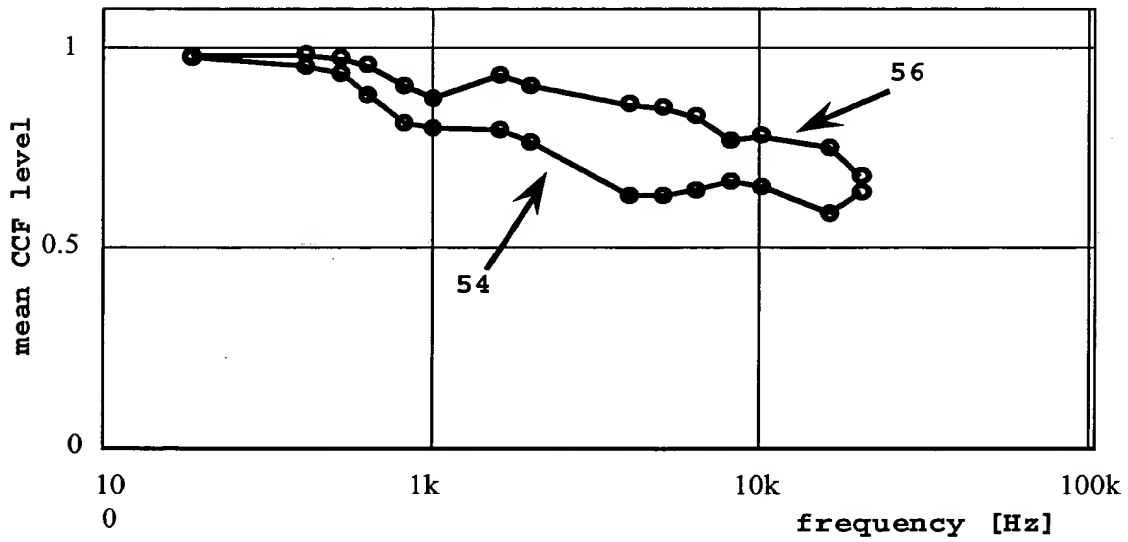


Fig. 11

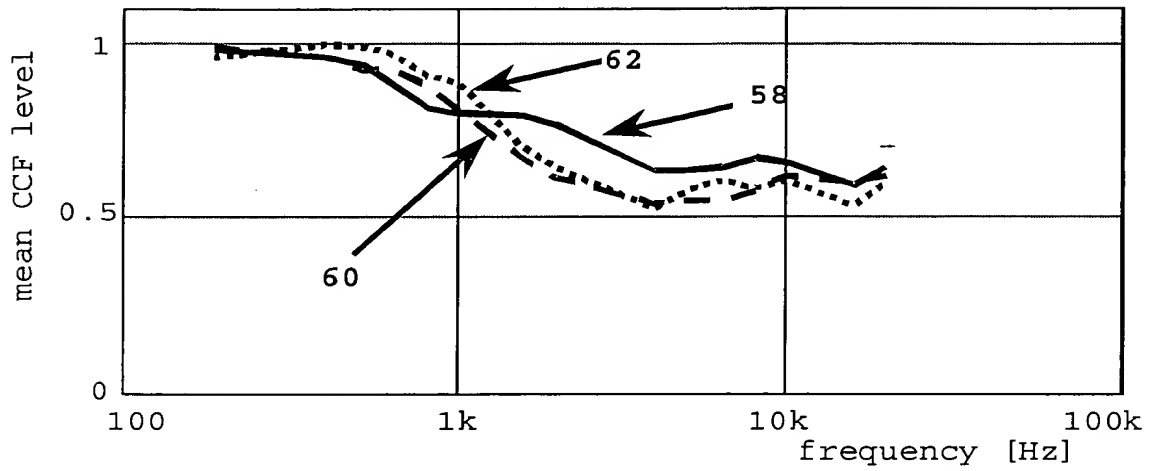


Fig. 12a

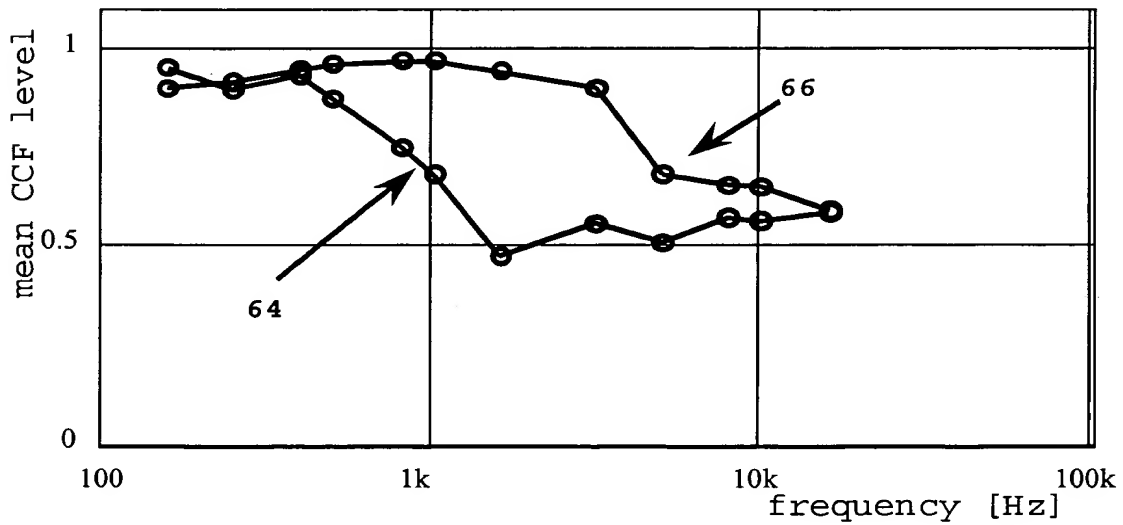


Fig. 12b

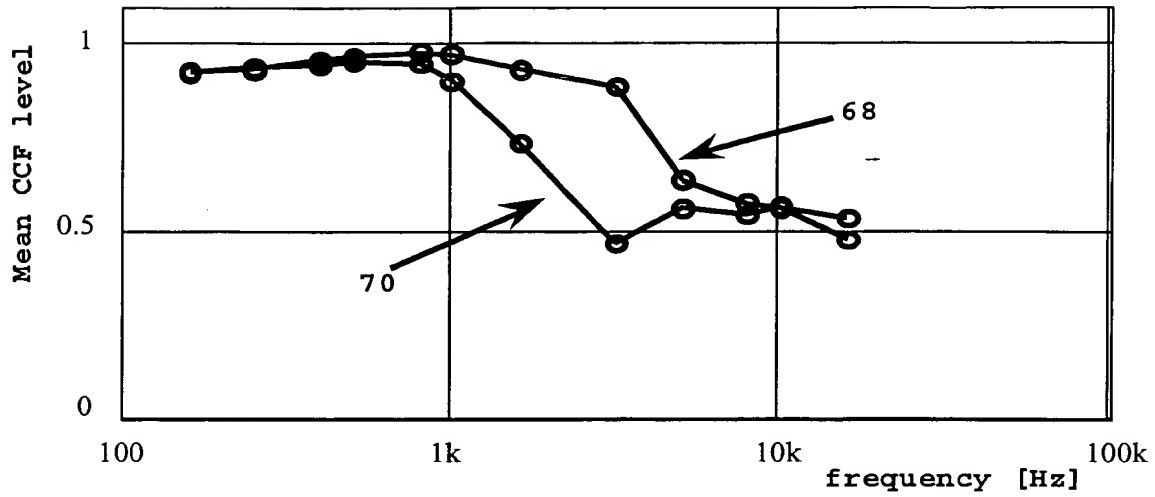


Fig. 13

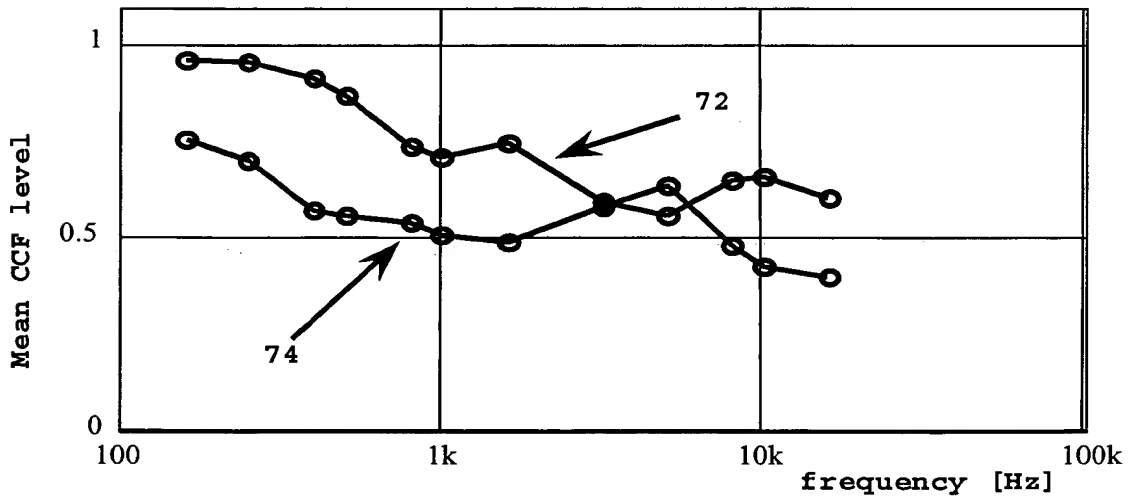


Fig. 14

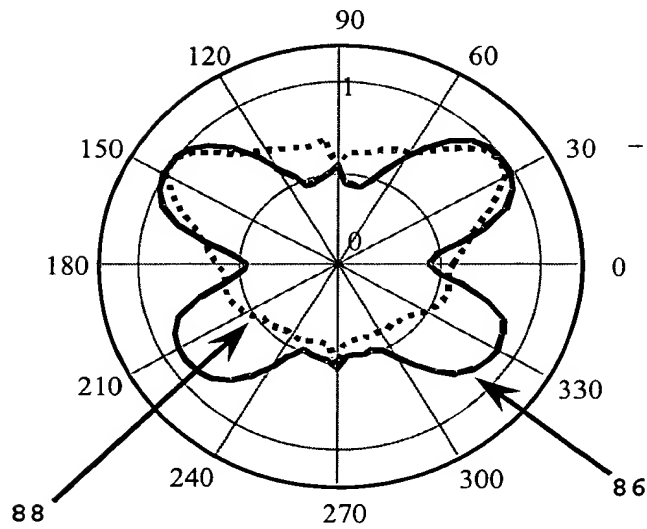


Fig. 16a

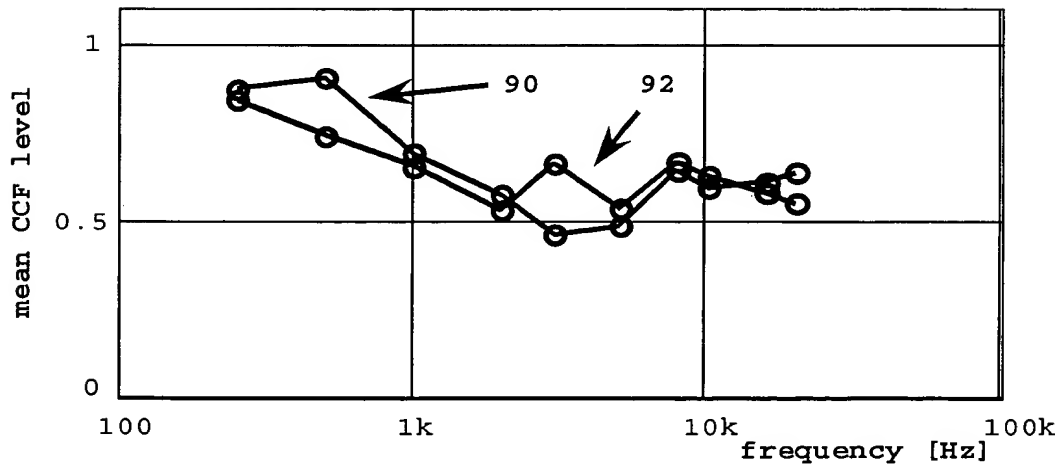


Fig. 16b

097400 20749760

Title: LOUDSPEAKER DESIGN
METHOD

Inventor(s): Nicholas P. R. HILL
al.

DOCKET NO.: 085874/0304

13/13

Fig 17

Choose reference position and measure response

(a)



Choose one or more other positions and measure the response

(b)



If frequency resolution is required filter the response into one or more bands.

(c)



Calculate the correlation of the reference position to the other positions

(d)



Plot the correlation levels as a function of angle from the reference position and/or the frequency range of the filter

(e)

Fig 18

Determine a target level of correlation in a given frequency band

(a)



Perform the diffusivity measure on the first iteration of the design

(b)



Adjust the properties of the loudspeaker.

(c)



Repeat the previous two steps until the target level of correlation is achieved

(d)